A S T A

Nomad
SERVICE BULLETIN

AIR CONDITIONING – HOT AIR INLET DUCTING – CHECK VALVE – REPLACEMENT (MOD N788)

1. PLANNING INFORMATION

A. Effectivity

All Nomad N22 series and N24 series aircraft.

B. Reason

The existing hot air check valve is subject to fatigue failure of the flapper assembly which will result in loss of engine power and in the event of single engine operation, debris from the failed valve may be ingested into the engine.

C. Description

The existing hot air check valve is removed and replaced with a "Lourdes" type check valve which has a warranty of 10 million cycles or 10 years service.

D. Compliance

(1) Compliance with this Service Bulletin is recommended.

(2) At the next 100 hourly inspection or within three months following receipt of this Service Bulletin, whichever comes first.

E. Approval

The requirement detailed herein has been approved by a person authorised under Civil Aviation Regulation 35 and conforms with the type certificate requirements.

F. Manpower

Approximately 3 man-hours.

G. Materials – Price and Availability

Available upon request to ASTA Defence – Customer Services.

H. Tooling

None.

I. Weight and Balance

None.

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J. **References**

Illustrated Parts Catalogue	Chap 21–40–00
Maintenance Manual	Chap 21–20–00 and 21–40–00

K. **Publications Affected**

Illustrated Parts Catalogue	Chap 21–40–00

2. ACCOMPLISHMENT INSTRUCTIONS

(1) Gain access to the LH and RH hot air check valves (Ref Fig 1) by opening the wing hinged leading edge doors.

(2) Carefully remove the insulation covering from the LH and RH check valves and retain for reuse.

NOTE

If the existing check valve is non-operational damage to internal components may have occurred. Take care when disconnecting or removing air conditioning pipes as it is important to locate and remove all loose particles/fragments from the system before reassembly.

(3) Disconnect the air conditioning pipe PN 1/N–74–201 (Ref Fig 1) and the air bleed pipe PN 1/N–72–119 (Ref Fig 1) from the LH hot air check valve.

(4) Disconnect the air conditioning pipe PN 1/N–74–202 and the air bleed pipe PN 1/N–72–120 from the RH hot air check valve.

(5) Remove the LH and RH hot air check valves (Ref Fig 1) from the aircraft.

(6) Inspect the check valve interior for signs of flapper assembly failure. If the flapper assembly and associated components show no evidence of damage proceed to step (12).

(7) If the flapper assemblies are damaged, non-operational or incomplete disassemble the valves and check that all loose components and fragments can be found. If any component or fragment is missing remove all bleed lines, fittings and hoses upstream of Wig-o-flex Tee Coupling PN 3752–12E (Ref IPC Chap 21–40–00).

(8) Carefully check all fittings and hoses removed in step (7) for the presence of the missing fragments.

(9) If the missing fragments are not recovered check the engine compressors for fragments and foreign object damage.

(10) Following recovery of all missing fragments and loose components discard the old check valves.

(11) Refit all bleed lines, fittings and hoses removed in step (7).

(12) Remove the flared unions from the bulkhead at LH and RH wsta 44.20 (Ref Fig 1) and discard. Retain the nut and the washer.

(13) Install the new Lourdes type hot air check valves PN L52700 S1–12ROKS (Ref Fig 1) on the aircraft using the nut and the washer. Torque tighten the nut to 55–65 lb in.

(14) Attach the air conditioning pipe P/N 1/N–74–201 and the air bleed pipe PN 1/N–72–119 to the LH hot air check valve.

(15) Attach the air conditioning pipe P/N 1/N–74–202 and the air bleed pipe PN 1/N–72–120 to the RH hot air check valve.

(16) Carry out the hot air pipes pressure test (Ref MM Chap 21–20–00) and check for leaks.

(17) Refit the check valve insulation covering removed in step (2).

CAUTION

ENSURE THE AREAS CONCERNED ARE CLEAN AND FREE FROM FOREIGN OBJECTS BEFORE CLOSING THE ACCESS DOORS.

(18) Close the wing hinged leading edge doors.

(19) Carry out the heating operational test (Ref MM Chap 21–40–00).

3. MATERIAL INFORMATION

Parts required per aircraft

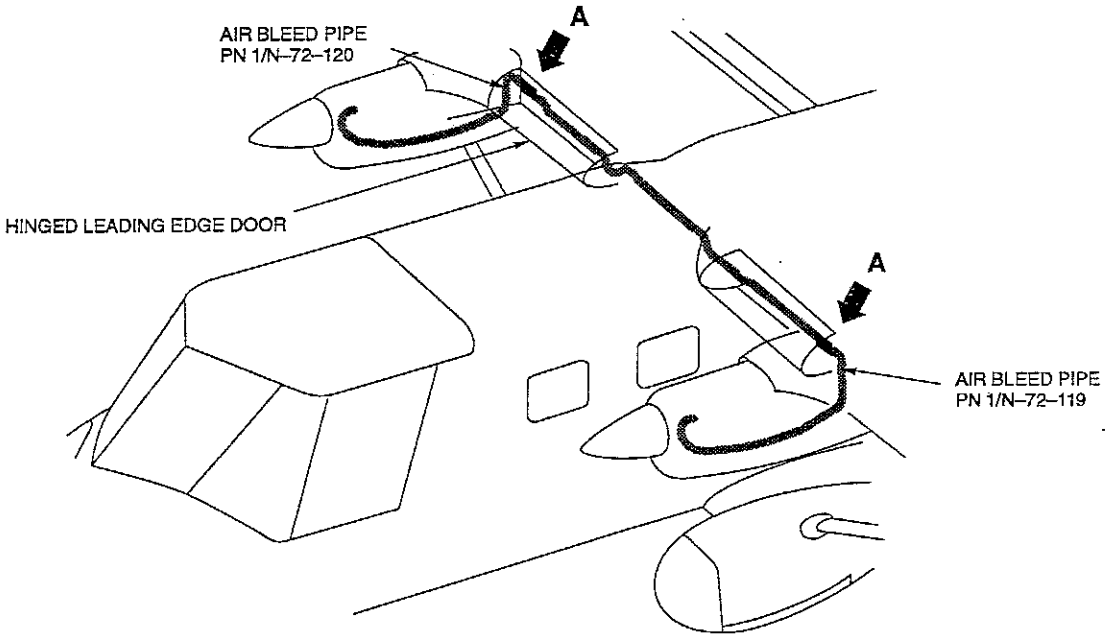
New Part No	Qty	Description	Old Part No	Instruction/Disposition
L52700 S1–12ROKS	2	Check valve "LOURDES"		
Parts removed				
	2	Check valve (Basic)	1/N–74–334	Scrap
		Check valve (Post Mod N298)	1/N–74–1024	Scrap
		Check valve (Post Mod N532)	3D2768–01	Scrap
	2	Union, Bulkhead	AN832–12	Scrap

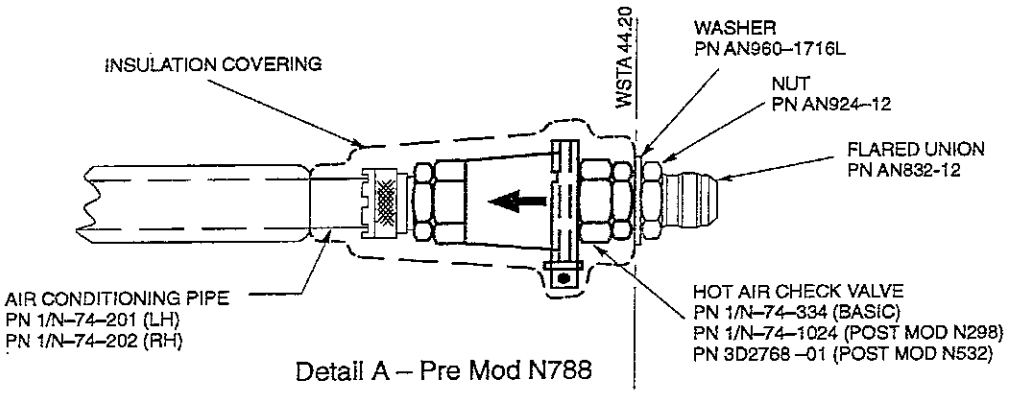
4. SPECIAL TOOLS AND EQUIPMENT

None.

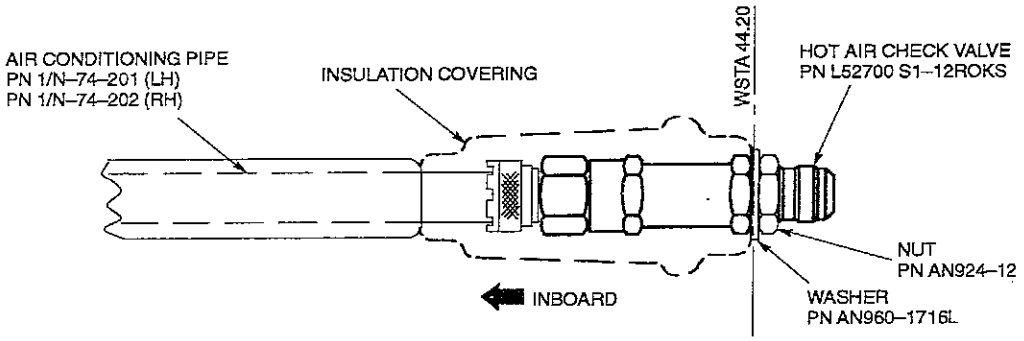
5. RECORDING ACTION

Record compliance with Service Bulletin ANMD–21–3 (Mod N788) in the Airframe Log Book.





Detail A – Pre Mod N788



Detail A – Post Mod N788

Figure 1 Hot Air Check Valve (Mod N788)